Fundamentals of Chemistry Laboratory

CHEM 100

Spring 2023

Lab (31692): Monday, 11:10 AM to 2:20 PM (NS-336)
Lab (31694): Wednesday, 11:10 AM to 2:20 PM (NS-336)
Lab (31691): Friday, 7:50 AM to 11:00 AM (NS-336)

Instructor: Shannon Andrews
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Office Hours:
Monday and Wednesday, 9:30 AM to 11:00 AM (NS-355H)
Monday, 2:30 PM to 3:30 PM (NS-355H)
Tuesday, 2:30 PM to 3:30 PM (NS-355H)

Required Materials
- Safety glasses (Z-87 or another approved style)
- Scientific calculator (no graphing or programmable calculators permitted)
- Notebook

Course Description
Introductory study of the principles and laboratory techniques of general chemistry.

Prerequisite
- One year of high school algebra

Corequisite
- Laboratory must be taken concurrently with lecture

Student Learning Outcomes (SLO's)
- Students will be able to predict the products of combustion, precipitation, and acid-base neutralization reactions.
- Students will be able to use dimensional analysis to solve stoichiometry problems.
- Students will be able to use a Beer's law plot to analyze the concentration of a solution.

- Students will be able to collect mass and volume data and use that data to determine the density of a liquid.
- Students will be able to determine the concentration of an acid or base solution using titration data.

Method of Evaluation

Category	***% of Overall Grade***	***Other notes***
Worksheets	15%	Use Canvas submission forms
Pre-lab questions & pre-lab videos	10%	On Canvas
Lab notebook and lab participation	40%	
Midterm & final lab practical exams	35%	

Assignment of Course Grades

At the end of the semester, the student's grade in lab will be sent to their respective lecture professor to incorporate into their grade for the course. The lab grade is 25% of the overall grade in the CHEM100 course. Students will only receive one letter grade for both CHEM100 lecture and lab.

Lab Notebooks

Students must purchase and maintain a lab notebook. A single subject composition or spiral bound notebook is sufficient. At the start of the course, the pages in the lab notebook should be numbered with an ink pen. The first page of the lab notebook will serve as a table of contents, to be updated throughout the semester. Finally, the lab notebook should only be used for chemistry lab. The notebook should not be used for other classes, including chemistry lecture. Students must maintain a physical, written notebook rather than an electronic notebook. During the midterm and final lab practical exams, students will be allowed to use their lab notebook as a reference. The lab notebook will be evaluated weekly based on the *Lab Notebook Rubric*, available in Canvas.

Cheating

Cheating in any form is unacceptable. Cheating on an exam will result in a zero on that paper and may result in a failing course grade. Cell phones must be turned off and put away during exams. If a student is caught using his or her cell phone or a graphing calculator during an exam, they will receive a zero for that exam.

Students are encouraged to work with one another and in groups. However, each student must think through the problems and processes on their own and submit their own solutions.

Make-up Labs

Unfortunately, make-up labs are not usually possible because all of the CHEM100 students at Palomar College complete the same lab activities each week. The

stockroom prepares reagents specifically for that week's lab. Students are allowed to miss one lab meeting, without penalty, because the lowest grade in the "Lab notebook and lab participation" category will be dropped. However, the student should complete the pre-lab questions and pre-lab worksheets associated with the missed lab(s).
Students who miss four or more lab meetings will automatically fail the course (both lecture and lab.)

Late to Lab
The first 10 to 15 minutes of class is usually spent introducing the experiment, discussing any modifications to the procedure, and highlighting safety considerations. This is crucial information. Therefore, students who miss this presentation at the start of lab will not be allowed to execute the lab. They will be asked to leave and will receive a zero for that day's activities.

Inappropriate Dress
In order to participate in lab, students must wear closed-toe shoes that adequately cover their feet, long pants, and shirts that cover their stomach. In addition, goggles are required when working in the lab. Students who are not dressed appropriately will not be allowed to participate in lab. They will be asked to leave and will receive a zero for that day's activities.

Notification of Services for Students with Disabilities
If you have a documented disability and would like to request accommodation and/or academic adjustments, please contact the Disability Resource Center (DRC). You should make contact as soon as a need for accommodation is known so that implementation can occur as soon as possible.

Disclaimer
A notice to students that certain circumstances may require some changes to this syllabus.